Dynamic Knowledge Management

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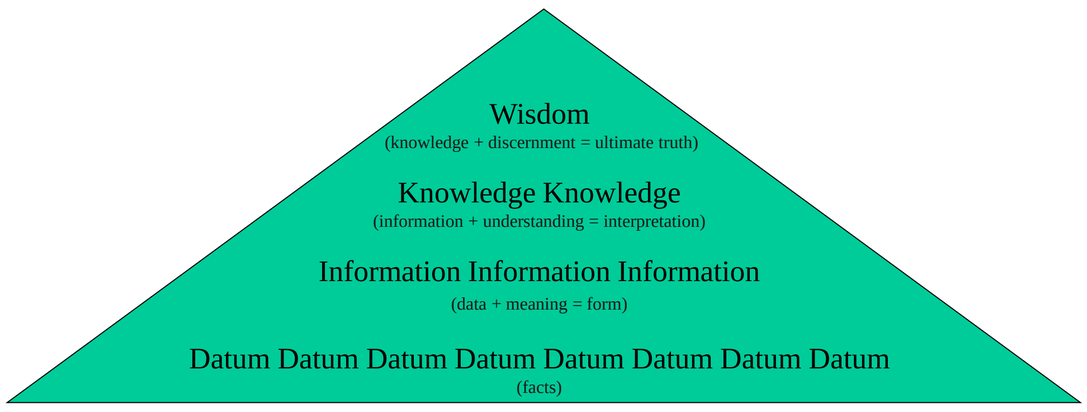
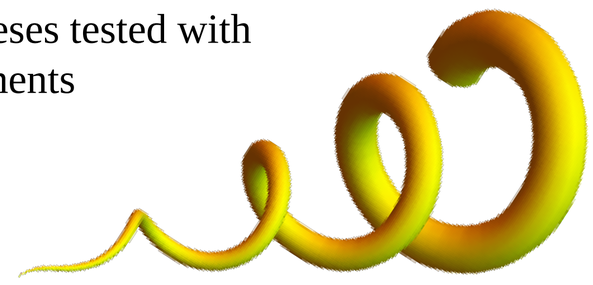


This conventional data/information/knowledge/wisdom pyramid is in essence a static map: ancient, unchanging, unfalsifiable and anti-growth.



Our alternative focuses on the symbiotic relationship between information and knowledge, an untapped area in the field.

We propose a dynamic alternative for KM based on the scientific method:

Data↔**Measurement**, Information↔**Outcome** from an **Experiment**,
Knowledge↔**Hypotheses** tested with **Experiments,** Wisdom↔**Explanation**

Our proposal includes tenets of continuous improvement that perpetually improve best practices and a model for generating new knowledge quickly.

A ***measurement*** is a labeled piece of data: numbers, text strings, photos, videos, etc.
Examples of measurements:
death:no, weight-loss:14lbs, nausea:false, family-history: normal

An ***outcome*** is a set of related measurements, and metadata.
An examples of an outcome:
{metadata: {patient:21, condition:3, location:7, patient-source: walk-in}, measurements: {death:no, weight-loss:10lbs, duration:4 days, …}}

An ***experiment*** is a set of 2+ outcomes, with metadata.
An example of an experiment:
{ control: { metadata: {drug:placebo, timesperday:2, duration:4 days, n:10}, outcome: {deaths:0, …}},
condition1: { metadata: {drug:pill23, timesperday:2, duration:4 days, n:12}, outcome: {deaths:2, …} }}

A ***hypothesis*** is a predictive mapping from a proposed experiment to outcomes.
An example of a hypothesis:
experiment: {control:drug=placebo, condition1:drug=no-drug}
prediction: insig. control:effect minus condition1:effect

An ***explanation*** is the wisdom from evaluating many hypotheses and it too is subject to constant criticism and improvement. Deutsch, David (2011). The Beginning of Infinity.